



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,561	09/27/2001	Atsunari Tsuda	110373	2259

25944 7590 05/21/2003

OLIFF & BERRIDGE, PLC  
P.O. BOX 19928  
ALEXANDRIA, VA 22320

EXAMINER

ABDULSELAM, ABBAS I

ART UNIT	PAPER NUMBER
----------	--------------

2674

DATE MAILED: 05/21/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/937,561

Applicant(s)

TSUDA, ATSUNARI

Examiner

Abbas I Abdulsalam

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quanrud (USPN 6140983) in view of Kawata (USPN 6313900).

Regarding claims 1-4 and 7-9, Quanrud teaches a display matrix (12) including a plurality of display elements (14) each of which includes a pixel (16) and a display circuit (18), which is electrically connected to the pixel and controls the operation of pixel (16). See Fig 1. Quanrud also teaches peripheral control circuits for controlling read and write operations to the memory cells. Quanrud further teaches a three bit planes that can be strobed in a variety of time modulation schemes to achieve the eight levels of grayscale in the color of a single illumination source. Furthermore, Quanrud teaches the use of two or more memory cells per pixel in a display matrix and discloses the use of the display matrix behaving like a memory that is addressable, readable and writable. See. Fig 8(B-C) and col. 19, lines 29-35. However, Quanrud does not disclose a timing detection device that detects timing to drive the pixels in the peripheral region of the display panel. Kawata on the other hand teaches a timing control circuit (424) for controlling various circuits including input circuit (423) and the peripheral circuits, which are provided around the pixel region (420). See Fig 5 and col. 8, lines 52-67.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify Quanrud's display system to adapt Kawata's timing control circuit. One would have been motivated in view of the suggestion in kawata that the timing control circuit serves the same purpose as the desired timing detection device. The use of timing control circuit helps function the liquid crystal display system as taught by Kawata.

In addition, Kawata teaches the external signals being supplied to pad region through the FPC (316). See Fig 4(a) and col. 8, lines 29-33.

Regarding claim 5, Kawata teaches the use of reflective-type liquid crystal panel using the liquid crystal panel substrate. Fig 5.

Regarding claim 6, Kawata teaches a scenario where the projected image will be a normally white display. See col. 11, lines 34-42.

Regarding claim 10, Quanrud teaches the use of display matrix with a writable memory configuration. See col. 19, lines 29-35.

### **Conclusion**

2. The prior art made of record and not relied upon is considered to applicant's disclosure.

The following arts are cited for further reference.

U.S. Pat. No. 6,157,429 to Miyawaki et al.

U.S. Pat. No. 5,877,844 to Matsumoto

U.S. Pat. No. 5,614,962 to Nagae et al.

U.S. Pat. No. 6,201,591 to Awne et al.

Art Unit: 2674

3. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Abbas Abduselam** whose telephone number is **(703) 305-8591**. The examiner can normally be reached on Monday through Friday (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard Hjerpe**, can be reached at **(703) 305-4709**.

**Any response to this action should be mailed to:**

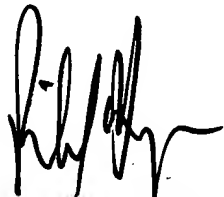
Commissioner of patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314**

Hand delivered responses should be brought to Crystal Park II, Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology center 2600 customer Service office whose telephone number is (703) 306-0377.



Abbas Abduselam

Examiner

**RICHARD HJERPE**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**  
Art Unit 2674